

S/N 10/672,199

Atty Dkt No. GP-302888/GM0361PUS

Remarks

This amendment is intended to be fully responsive to the office action mailed November 14, 2005.

In this action, the Examiner has rejected claims 1, 3-6, 8-10, 12 and 13 under 35 USC §102(b) as being anticipated by Ichinomiya (JP 04121407). The Examiner has also rejected claims 2, 7, 11, 14 and 15 under 35 USC §103(a) as being unpatentable over Ichinomiya (JP 04121407). Enclosed is a certified translation of Japanese Patent JP 04121407.

Rejection under 35 USC §102(b)

For a rejection to be proper under 35 U.S.C. § 102, every element and limitation found in the rejected claim must be found in the § 102 reference. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” MPEP §2131, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added).

Independent claims 1 and 6 require a “second group of *deactivatable cylinders*” connected with a second exhaust manifold which acts as a resonator to attenuate sound “when the second group of cylinders are deactivated” (emphasis added). The Examiner will agree after reading the translation that Ichinomiya is completely silent regarding cylinder deactivation. Ichinomiya makes no mention of cylinder deactivation or deactivatable cylinders whatsoever. Therefore, Ichinomiya does not teach “a second group of deactivatable cylinders” connected to a second exhaust manifold which acts as a resonator to attenuate sound “when the second group of cylinders are deactivated”.

In the present invention, when the cylinder bank 14 is deactivated the otherwise unused, non-flowing volume of the second exhaust manifold 18 is put to use in a novel way to act as a resonator. This is simply not taught or suggested in any way by the cited prior art. In order to further clarify this distinction, each independent claim has been amended to recite that

S/N 10/672,199

Atty Dkt No. GP-302888/GM0361PUS

the "otherwise unused volume of the" second exhaust manifold acts as a resonator when the second group of cylinders is deactivated. Support for this amendment can be found in paragraph [0005] of the Application as filed.

Accordingly, because every limitation of independent claims 1 and 6 is not taught by the cited reference, the rejection under 35 USC §102(b) is improper. The corresponding dependent claims are allowable for at least this reason.

Rejection under 35 USC §103(a)

As recited in the MPEP, "[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness." MPEP § 2142. Three basic criteria must be met to establish *prima facie* obviousness. MPEP § 2143. First, there must be some suggestion or motivation to modify a reference or combine teachings. *Id.* Second, there must be reasonable expectation of success. *Id.* Third, the prior art reference or references must teach or suggest all the claim limitations. *Id.*

Independent claim 14, like claims 1 and 6 discussed above, requires a "second group of *deactivatable cylinders*" connected with a second exhaust manifold which acts as a resonator to attenuate sound "*when the second group of cylinders are deactivated*" (emphasis added). Again, the Examiner will agree after reading the translation that Ichinomiya is completely silent regarding cylinder deactivation. Ichinomiya makes no mention of cylinder deactivation or deactivatable cylinders whatsoever. Therefore, Ichinomiya does not teach "a second group of deactivatable cylinders" connected to a second exhaust manifold which acts as a resonator to attenuate sound "when the second group of cylinders are deactivated". Accordingly, all elements of independent claim 14 are not taught by the cited reference, and therefore the rejection under 35 USC §103(a) is improper. Applicant therefore respectfully requests that the Examiner reconsider these rejections in light of the enclosed translation of the cited reference.

S/N 10/672,199

Atty Dkt No. GP-302888/GM0361PUS

The various dependent claims are allowable for at least the reasons discussed above.

Regarding the rejection of dependent claims 2, 7 and 14 under 35 USC §103(a), Applicant disagrees that it would have been "an obvious matter of design choice" to select the length of the manifold to form a one-quarter wave tuner, as indicated by the Examiner. The proper selection of the attachment point between the first and second manifolds, and the corresponding length of the second exhaust manifold to form a one-quarter wave tuner is not an obvious matter of design choice. There are many packaging limitations associated with the placement and length of exhaust manifolds, and the prior art provides no teaching regarding the use of the non-flowing volume of an exhaust manifold connected to deactivated cylinders of the engine as a sound attenuating resonator, nor does it teach the claimed second manifold being connected to the first manifold in a manner to provide a one-quarter wave tuner. It is respectfully submitted that Examiner has provided no appropriate teaching of this supposedly "obvious matter of design choice" to support this rejection.

Further, regarding claim 15, the Examiner has provided no prior art teaching an exhaust manifold having a valve with a hole therein to form a Helmholtz resonator. Applicant respectfully requests that the Examiner cite appropriate prior art to support this taking of Official Notice.

Conclusion

Accordingly, in light of these remarks, the attached amendment and the enclosed translation of the cited prior art, it is respectfully submitted that all claims are currently in condition for allowance, which action is requested.

Respectfully submitted,

WILLIAM C. ALBERTSON

S/N 10/672,199

Atty Dkt No. GP-302888/GM0361PUS

By


Christopher W. Quinn
Reg. No. 38,274

Date: 2/3/06

QUINN LAW GROUP, PLLC
39555 Orchard Hill Place, Ste. 520
Novi, Michigan 48375
Phone: 248-380-9300
Fax: 248-380-8968

On behalf of:

Leslie C. Hodges
GENERAL MOTORS CORPORATION
Legal Staff Mail Code 482-C23-B21
P.O. Box 300
Detroit, Michigan 48265-3000